

Letter For Electronic Distribution

Original signed letter on file at the following address:

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February 28, 2000

Mr. James Brown
Remedial Project Manager
Department of the Navy
Environmental Restoration Branch
Engineering Field Activity Northwest
Naval Facilities Engineering Command
19917 7th Avenue N.E.
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RE: Draft Final Decision Document dated August 27, 1999, for Sites 4, 7, 9, 10, 11, 12, 17, 18, 19, 23, and 24
NDEP Response to Site 4, Transportation Yard
Remedial Investigation/Feasibility Study
Naval Air Station Fallon

Dear Mr. Brown:

Nevada Division of Environmental Protection (NDEP) staff has reviewed NAS Fallon's Report titled *Decision Document, Sites 4, 7, 9, 10, 11, 12, 17, 18, 19, 23, and 24, Draft Final*, dated August 27, 1999. This report was prepared in response to a series of NDEP letters which commented on NAS Fallon's report titled *Record of Decision, Sites 4, 5, 7, 8, 9, 10, 11, 15, 17, 18, 19, 23, 24, 25, 26, 27 Naval Air Station Fallon* (ROD), Dated June 5, 1998. Due to significant changes between the Draft Final Decision Document and the Record of Decision, the referenced Draft Final Decision Document was reviewed as a draft document instead of a draft final. NDEP's comments on Site 4, Transportation Yard, are addressed in this letter.

The level of detail and explanation presented in the Draft Final Decision Document does not appear to adequately explain the extent of soil and groundwater contamination associated with Site 4. Based on NDEP's review of site conditions and supporting documentation to verify information provided in the Draft Final Decision Document, the NDEP is concerned that pertinent data have not been appropriately integrated into the analysis of site conditions which has led to an inadequate evaluation

of soil and groundwater contamination. NAS Fallon has asserted that contamination at Site 4 originates from Site 2. To obtain a better understanding of conditions at Site 4, the NDEP requested clarification on geological conditions at Site 4 in a letter dated January 21, 1999. NAS Fallon did not provide the data. Therefore, the NDEP conducted its own precursory evaluation of geological conditions at Site 4 based on available data. Results of the evaluation suggest that data collected during the Preliminary Assessment/Site Inspection (PA/SI) and Remedial Investigation/Feasibility Study (RI/FS) were not clearly organized in the Remedial Investigation (RI) Report or the Draft Final Decision Document, and that some data were not considered in the analysis to assess site conditions. A review of available data from several documents indicates that soil and groundwater contamination may originate from Site 4 instead of Site 2. Also, it now appears that the extent of soil and groundwater contamination at Site 4 may be more extensive than previously thought when NDEP concurred with "No Further Action" in the May 1994 letter.

NAS Fallon has asserted that groundwater remediation and monitoring at Site 4, as necessary, will be accomplished as part of the ongoing Site 2 remedial actions. In a letter dated May 17, 1994, the NDEP concurred with "No Further Action at this time". Concurrence was based on data provided in the draft RI Report, and with the understanding that groundwater remediation would be implemented at Site 4 in accordance with the document entitled *Preliminary Site Characterization Summary and Engineering Evaluation/Cost Analysis for Site 2-New Fuel Farm* (EECA), dated June 1991, and a second document entitled *Final Design, Removal Action, Site 2, New Fuel Farm*, dated May 5, 1992. To this date, the NDEP does not have documentation showing that remedial efforts have been implemented or why remedial efforts were not implemented. Since the May 17, 1994 letter, several GTI wells were installed (July 1995) at Site 4 which indicated that the free product thickness near the down gradient edge of the plume exceeded the State action level of ½ inch. Based on NDEP's review of the administrative record, there appears to be no data available to support the conclusion that remedial efforts at Site 2 will be effective at Site 4.

This document needs to be available to the public for review, as appropriate, and an accurate record in the Decision Document is required so that the public can make an informed decision. It is important that all data collected during the PA/SI and the RI/FS be presented accurately and completely, especially since considerable time has elapsed since any work was performed at the site. Appropriate data analyses need to be presented to support conclusions. The public needs to understand that soil and groundwater contamination at Site 4 have exceeded the State action levels, and that the extent of contamination may not have been fully investigated.

Throughout the course of the RI/FS process, NAS Fallon has made reference to poor water quality in the upper aquifer underlying the base. This issue was not formally addressed in the Draft Final Decision Document. If NAS Fallon desires to seek an exemption from correction action requirements for this site due to high total dissolved solids (TDS) in accordance with NAC 445A.22725 (2)(b), then a formal request must be made. TDS concentrations in the upper aquifer vary considerably. Based on available information, TDS concentrations appear to be below 10,000 mg/L in many areas at NAS Fallon. To demonstrate that TDS concentrations are above 10,000 mg/L, isocon maps need to be prepared. Regardless of the TDS concentration, an exemption from corrective action cannot be authorized for groundwater that discharges into drainage canals which flow into several lakes and

wetlands in the area.

Formal approval of a “No Further Action” Decision Document is based on the extent of the investigation and remediation, an understanding of the nature and extent of contamination, documentation in the administrative record, and post closure care which includes institutional controls, land use restrictions, and/or post-closure monitoring. The NDEP is concerned that contamination associated with Site 4 is more extensive than disclosed in the Draft Final Decision Document. Of considerable concern to the NDEP is that documentation to support the “No Further Action” recommendation in the Draft Final Decision Document does not appear to be included in the administrative record. In a letter dated January 21, 1999, the NDEP requested that supporting documentation (including boring logs with soil screening results, analytical reports, calculations supporting groundwater velocities, and the Sampling and Analysis Plan) be provided to the NDEP. However, only groundwater velocity calculations were provided. In consideration of these factors, and the fact that the State action levels for Total Petroleum Hydrocarbon (TPH) contamination in soil and free product thickness on the water table have been exceeded at Site 4, the NDEP cannot concur with “No Further Action” for Site 4 at this time.

NAS Fallon needs to address contamination at Site 4 in accordance with State regulations (e.g. remediate the site or perform a risk assessment in accordance with NAC 445A.226 through NAC 445A.22755). The NDEP will consider “No Further Action” for Site 4 if NAS Fallon provides justification why remedial action was not implemented in accordance with the EECA, and if an appropriate post-closure groundwater monitoring plan is submitted to the NDEP for comment and approval. NDEP’s comments on the Draft Final Decision Document for Site 4 are provided below. An appropriate response must be provided for these comments before the NDEP can consider “No Further Action”. NAS Fallon has not responded to many of NDEP’s comments presented in the letter dated January 21, 1999. Comments in that letter which were not addressed in the Draft Final Decision Document are reiterated in this letter. Since many of the issues regarding Site 4 have been on-going and unresolved for an extended period of time, please provide a time frame and schedule for addressing the comments in this letter within 30 days. If we as project managers cannot come to a resolution of these issues, the NDEP will need to initiate the dispute resolution process.

COMMENTS

1. Page 1, first paragraph: The Draft Final Decision Document states “*This Decision Document provides a formal record for the remediation for Site 4, the Transportation Yard.....*”. Site 4 was investigated, not remediated. The above statement needs to be revised accordingly. Also, reference is made to DON 92 which is the Navy/Marine Corps Installation Restoration (IR) Manual dated 1992. It should be noted that this manual was updated in 1997. The 1997 IR Manual provides the most current IR Program policy, guidance and information to Remedial Project Managers who have primary responsibility to ensure proper, timely, and cost effective IR Program implementation. It appears the 1992 IR Manual was used by the Navy to prepare the Draft Final Decision Document. Some of NDEP’s comments provided below reference the Navy IR Manual. For these comments, the 1997 manual was used instead of the 1992 manual.

2. Page 1, second paragraph: The Draft Final Decision Document states “*The Department of Defense as lead agency has the authority to undertake Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) response actions, including removal actions under 42 U.S.C. #9604, 10 U.S.C. #2705 and Federal Executive Order 12580*” .

CERCLA and Executive Order 12580 (Superfund Implementation) require that removals and remedial actions at facilities owned or operated by the Department of Defense (DoD) comply with State laws. Furthermore, Executive Order 12088 (Federal Compliance with Pollution Control Standards) states that each executive agency (which includes DoD) is responsible for compliance with applicable pollution control standards, and that the executive agency shall cooperate and consult with State agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution. Applicable pollution control standard means the same substantive, procedural, and other requirements that would apply to a private person, and includes reducing contaminant concentrations to the Applicable or Relevant and Appropriate Requirements (ARARs). This information should be included in the Decision Document for clarity.

3. Page 1, third paragraph: The Draft Final Decision Document states: “*The decision not to undertake a remedial action for these sites is deemed consistent with the factors set forth within the National Contingency Plan (NCP) 40 CFR part 300, and Nevada Administrative Code (NAC) Sections 445A.226 through 445A.22755 and 459.9973. This decision was based on one or more of the following*” (three bulleted reasons follow).

The NDEP cannot concur with the above statement, or the statements after the bullets, for the following reasons.

- C Supporting documentation appears to be missing from the administrative record. Therefore, NAS Fallon does not appear to be in full compliance with 40 CFR Part 300, Subpart I (Administrative Record for Selection of Response Action). See comments **11, 17, 20, 25, 27** and **30**.
- C NAC 459.9973 applies to storage tanks and is not applicable for this site.
- C Existing documentation shows that TPH concentrations in soil exceed the State action level of 100 mg/kg and the free product thickness on the water table exceeds the State action level of ½ inch. Therefore, the statement after the second bullet does not appear to be correct. See comments **10, 19, 20** and **29**.
- C A human health and ecological risk assessment was not performed for soils at Site 4. Based on laboratory data listed in Table 5.1 from the Baseline Risk Assessment (page A-46), the high TPH concentration identified during the PA/SI does not appear to have been provided to the risk assessment team for consideration, and the extent of soil contamination does not appear to have been investigated during the RI. Also, the risk assessment for contaminated ground water at the Group I Sites appears to have completed before groundwater analytical data at Site 4 were collected. Therefore, the statements after the first

and third bullets cannot be verified. See comment **22**.

4. Page 1, last paragraph in Section I: The Draft Final Decision Document states: “*The Nevada Division of Environmental Protection (NDEP) has reviewed this document and concurred with this decision. There are not any nationally significant or precedent setting issues for this site.*”

Based on a reassessment of site conditions to verify information provided in the Draft Final Decision Document, the NDEP cannot concur with the first sentence in the above statement. The NDEP did concur with “No Further Action” in a letter dated May 17, 1994 which states: “*No further investigative or remedial actions are required at Site 4 at this time.*” However, this statement was provided with the understanding that groundwater remediation would be implemented at Site 4 in accordance with the following documents:

C Preliminary Site Characterization Summary and Engineering Evaluation/Cost Analysis for Site 2-New Fuel Farm (EECA), dated June 1991.

C Final Design, Removal Action, Site 2, New Fuel Farm, dated May 5, 1992.

Concurrence was provided before all RI/FS data were collected, and was based on an incomplete understanding of site conditions. It now appears that significant soil and groundwater contamination is associated with Site 4 and remedial action is required. See comment **24**.

For those sites where NDEP concurs with “No Further Action”, the last sentence needs to be changed to state that concurrence with “No Further Action” is based on achieving the cleanup goals which are the Applicable or Relevant and Appropriate Requirements (ARARs). ARARs include Federal Maximum Contaminant Limits (MCLs) and Preliminary Remedial Goals (PRGs), and State Action Levels. Also, as stated on page 1-18 of the RI Report, the action level for TPH in ground water is 1 mg/L when ground water discharges to surface water.

5. Page 2, Section A, last paragraph: “*No soil contamination was found in relation to the activities at Site 4 and the source of groundwater contamination below the site is from the free product and minimal dissolved plume from Site 2, the New Fuel Farm*”.

The NDEP does not concur with the above statement. TPH concentrations in soil and the free product thickness on the water table at Site 4 have exceeded the State action levels. This information was documented in the PA/SI Report dated April 1988, the RI Report dated September 1994, and the January 25, 1996 Progress Report. Also, based on a review of RI/FS data collected from Sites 2 and 4, the source of groundwater contamination at Site 4 appears to be the Truck Wash-Down Area and Former Sump at Site 4, not Site 2. See comments **10**, **19**, **20** and **28**.

6. Page 2, Section 1.2 Geology: The Draft Final Decision Documents states “*The soils beneath NAS Fallon are primarily fine grain (clay, silt & silty clay) with small amounts of coarser grain material (sand, silty sand & sandy silt). Soil permeability is generally in the range of 10⁻*

⁴ to 10⁻² centimeters/second (cm/s); however, local areas of coarser grained or clayey soil may display higher or lower permeability than this range.” The PA/SI Report prepared by Dames & Moore, and dated April 1988, was referenced.

The first sentence stated above appears to be inconsistent with the PA/SI Report prepared by Dames & Moore. The Dames & Moore Report states on page 4-24:

“Shallow lake deposits are present at ground surface throughout much of NAS Fallon. These deposits consist mainly of clay and silt in the southeast corner of NAS Fallon, and of mainly sands elsewhere on the base..... Eolian sand deposits are found in the northwest corner of NAS Fallon... Most of the Quaternary sedimentary fill in the Carson Desert was transported into the valley by the ancestral Carson River. Coarse-grained alluvial deposits form stringers which trend roughly northwesterly across NAS Fallon... These were laid down in ancient distributary channels of the Carson River. Fine-grained alluvium, mostly silts, were deposited in areas between the channels”

The above description of geologic conditions indicates that contaminants in groundwater at NAS Fallon may be transported at higher velocities than indicated by the geologic description in the Draft Final Decision Document. This information needs to be included in the Decision Document. If the interpretation of lithologic conditions changed based on data collected during the RI/FS, then supporting documentation must be provided.

The RI Report was reviewed to determine if site-specific geological data are available. Page 7-17 of the RI Report provides a brief description of geologic conditions at Site 4 and states:

“The deltaic sediments have been dissected by an ancient former Carson River channel. The upper 10 to 12 ft of the monitoring wells display predominantly poorly graded sands,... fine-to medium-grained, with some silt ... Interbedded with these sands are stringers of clayey silt.... The lower 10 to 12 ft of the Fallon Formation is sand. These sand layers vary in lithology from fine- to medium-grained, poorly graded sand to fine- to coarse-grained, well-graded sand with abundant 3 to 4-mm pebbles. The aforementioned sands represent beach and deltaic deposits and are generally found in monitoring wells west of MW05, MW10, and PW01. The well-graded sands represent a paleo-river channel deposited by the ancient Carson River.”

Information provided in the above quote is consistent with the PA/SI Report. It is also significant to note that three test borings (TB01, TB02, and TB03) were drilled near the Truck Wash-Down Area and Former Sump to collect data for the design of a remediation trench to be installed at Site 4. Based on boring logs presented in the report entitled *Final Design, Removal Action, Site 2 New Fuel Farm*, dated May 5 1992, soils in all three borings were predominantly sand. This is critical information for evaluating contaminant transport at Site 4 and needs to be included in the Decision Document.

7. Page 3, Section 1.4, Contaminant Fate and Transport: The Draft Final Decision Document states “A spill could occur during a rare rainstorm or human induced runoff and be sufficient

to carry contaminant or contaminated soils directly into the irrigation or drainage canals.”

Spills frequently occur at NAS Fallon during normal base operations. The above statement needs to be revised to state that a spill could occur **during normal base operations** and be sufficient to carry contaminants or contaminated soils directly into the irrigation or drainage canals.

8. Page 4, Section 1.4, second paragraph: The Draft Final Decision Document states: “*Because of low precipitation and high evaporation rate, small releases can not reach the water table*”. This statement should say “..... *small releases **at the ground surface may not reach the water table***”.
9. Page 4, Section C, Site 4 Description: The Draft Final Decision Document states: “*The outdoor vehicle maintenance yard and Building 378 floor drains were the areas of concern associated with Site 4.*”

The Decision Document needs to include a description of the Truck Wash-Down Area and Former Sump. The sump was reportedly used for collecting fuel from leaking tanker trucks at the fuel farm (see page 7-36 of the RI Report), and appears to be the source of the free product plume at Site 4.

10. Page 4, Section 1.1, The Transportation Yard: The Draft Final Decision document states: “*At two locations soil samples were collected at the base of the stained area and several inches below the stained area. The results of these analyses suggest that concentration of total petroleum hydrocarbons (TPH) in the stained area attenuated rapidly with depth. It was concluded that oil spills and leaks have not resulted in substantial soil contamination in this area (Dames & Moore Apr. 88)*”.

The NDEP does not concur with the above statement. The NDEP responded to a similar statement in NAS Fallon’s ROD dated June 5, 1998. (See the first paragraph under Other Issues in NDEP’s letter dated January 21, 1999.) NAS Fallon did not respond to NDEP’s concerns presented in the January 21, 1999 letter. As stated in that letter, the Decision Document needs to present the facts regarding these two soil samples. The two soil samples collected during the PA/SI were located in two different stained areas, approximately 250 feet apart. One sample was collected 3 inches below the ground surface and the other sample was collected 5 inches below the ground surface. The TPH concentration in the sample located north of building 378 was 17,000 mg/kg. The location of this soil sample also coincides with the location of boring TB01 where the free product thickness on the water table was approximately ½ inch (See comment 20). A free product thickness of 0.84 feet was measured in monitoring well GTI-28, located approximately 150 feet northeast of TB01 and near the down gradient edge of the plume. This information needs to be included in the Decision Document.

11. Page 4, Section 1.2, Building 378: The Draft Final Decision Document states “*Inspection indicated that no leachfield existed*”. As stated in NDEP’s letter dated January 21, 1999,

information that is used to justify “No Further Action” must be backed up with supporting documentation. Field notes verifying the results of the inspection need to be presented. See comment **27**.

12. Page 5, Section 1.2, first paragraph on page: The referenced photo is of poor quality and cannot be interpreted. However, the NDEP did perform an inspection of the building and in a letter dated October 3, 1996 confirmed that floor drains were plugged.
13. Page 5, Section 1.2, 2nd paragraph on page: The Draft Final Decision Document states “*The results of the investigation indicated that no significant contamination was found associated with the activities at Site 4 (ORNL 94(I)).*”

Due to high TPH concentrations identified during the PA/SI and the presence of free product on the water table at the Truck Wash-Down Area and Former Sump, the NDEP does not concur with this statement. See Comments **10, 19, 20, and 28**.

14. Page 5, Section D, National Priorities List (NPL) Status: The Draft Final Decision Document states “*The U.S. Environmental Protection Agency (U.S. EPA) has reached a decision on no further action under CERCLA and removed NAS Fallon from its listing. NAS Fallon Sites are Non National Priorities List (Non-NPL) sites.*”

If this section remains in the Decision Document, it needs to clarify that regardless of U.S. EPA’s decision on no further action under CERCLA and omission of NAS Fallon from the NPL list, investigations and remedial actions are still required under the IR Program and State regulations. The 1997 Navy/Marine Corps IR Manual states on page 6 “*All sites, whether on the NPL or not, require notification, public participation, and implementation of state and Federally defined ARARs.*” The manual also states that the Navy/Marine Corps IR Program includes the cleanup of spills of petroleum, oil, or lubricants as well as hazardous wastes. It should be noted that petroleum hydrocarbons are not included in the CERCLA process, but are required to be investigated and remediated under State regulations. Therefore, the CERCLA process alone does not completely guide the process of investigating and remediating contaminated sites at NAS Fallon.

15. Page 5, Section E, Role of the State: The Draft Final Decision Document states “*Removal actions are reviewed and commented upon by NDEP pursuant to NAC Sections 445A.226 through 445A.22755 and 459.9973 regarding the release of petroleum products.*”

This statement needs to be revised. NAC 445A.226 through 445A.22755 regulate corrective action at sites contaminated with any regulated substance, not just petroleum products. NAC 459.9921 through 459.999 regulate the release of petroleum products associated with storage tanks. NAC 459.9973 should not be referenced alone. The release at Site 4 appears to be associated with a sump, not a storage tank. The sump was reportedly used for collecting fuel from leaking tanker trucks at the fuel farm (see page 7-36 of the RI Report). Even if the release at Site 4 is considered to be a continuation of the Site 2 plume, previous NDEP determinations do not consider the release to be associated with storage tanks. NDEP’s letter

dated July 6, 1992, states “*leaking underground storage tanks (LUSTs) may be responsible for some of these plumes. However, the majority of the plumes at Site 2 originated from either non-LUST releases (oil/water separators), or from unconfirmed sources. Since non-LUST sources are responsible for much of contamination at Site 2, a hazardous waste characterization, as outlined in RCRA Part 261, must be conducted on material excavated during corrective actions at the site.*” In consideration of the above, NAC 459.9921 through 459.999 are not applicable for Site 4. It should also be noted that pursuant to NRS 445A.690, an order may be issued for noncompliance with State regulations, and civil penalties up to \$25,000 per day may be imposed pursuant to NRS 445A.700.

16. Page 5, Section F, Highlights of Community Participation: The Draft Final Decision Document states “*An initial TRC scoping meeting was held at NAS Fallon in June 1989 to discuss potential requirements for the future PA/SI or remedial investigations and feasibility studies (RI/FS) activities at NAS Fallon.*”

The PA/SI Report was completed in April 1988. The above statement is inconsistent in regards to the “future PA/SI” and needs to be corrected.

17. Page 6, Section F, last paragraph (2nd paragraph on page): The Draft Final Decision Document states “*The Draft Decision Document dated November 1995 for 6 sites including Site 4 was published on 31 January 1996 in the Lahontan Valley News and the Fallon Eagle Standard. These community participation activities fulfill the requirements of the CERCLA: Section 113(k)(2)(B)(I-v) and 117(a)(2). The Administration Record is available for review at the Churchill County Library.*”

The Draft Decision Document dated November 1995 (received by NDEP January 23, 1996) was never completed by NAS Fallon, even after the NDEP provided comments in a letter dated March 5, 1996. Due to the elapsed time since the original Draft Decision Document was published, the lack of initiative by NAS Fallon to respond to NDEP’s comments and complete the decision document, and the fact that the current decision document will contain different information, community participation during review and approval of the revised Draft Final Decision Document may need to be addressed again.

Pages 6 and C-1 in the Draft Final Decision Document state the administrative record is available for review at the Churchill County Library and the administrative record is complete. The NDEP contacted the Churchill County Library during October 1998 regarding the administrative record. Based on information provided to the NDEP, the administrative record is not complete. Please ensure that all documents referenced in the Decision Document are located at the library for the public to review.

Based on Appendix A in the Draft Final Decision Document (Administrative Record), the documents listed below were not included in the administrative record. These documents should be listed because they contain data, factual information, and analyses that form the basis for the selection of the response action.

- C Progress Reports that included data or interpretations for Site 4. NDEP previously requested that this information be included in the Decision Document (see NDEP's letter dated March 5, 1996).
- C The document entitled *Final Design, Removal Action, Site 2, New Fuel Farm*, dated May 5, 1992.
- C Laboratory analytical reports.
- C Boring documentation (logs, soil screening result, etc.) for the three borings drilled near Building 378.
- C Inspection report verifying that no leachfield existed for Building 378.
- C Boring documentation (logs, soil screening result, etc.) for the two borings drilled up gradient of the Truck Wash-Down Area and Former Sump (borings S2BH1 and S2BH2).
- C Boring documentation (logs, soil screening result, etc.) for the GTI wells.

18. Page 6, Section III, Investigation Summary: The Draft Final Decision Document states "*The Transportation Yard, Site 4 and New Fuel Farm, Site 2 were evaluated together as Group I, due to proximity and potential for overlapping areas of contamination. The Phase II RI consisted of conducting a geophysical survey, 15 soil borings, 225 soil gas survey samples, 105 groundwater test borings, 19 monitoring wells, and 7 piezometers. Most of these investigations were conducted to evaluate the dissolved and free product plume on Site 2.*"

The vast majority of these activities cannot be used to evaluate the nature and extent of contamination at Site 4. Those activities pertinent to Site 4 should be pointed out in this section. For Site 4, investigation activities completed prior to the RI Report included the following:

- C Drilling three borings located at the south end of Building 378 (BH01, BH02, and BH03).
- C Installing two monitoring wells (MW01 and MW02) at the south end of Site 4.
- C Drilling 8 groundwater test borings, of which 5 detected contamination, around the Truck Wash-Down Area and Former Sump (see Figures 7.9 and 7.10 in the RI Report, pages 7-22 and 7-27).

Also, borings TB01, TB02, and TB03 were drilled south of the Truck Wash-Down Area and Former Sump in 1991 for remedial design purposes. After the RI Report was completed, and after the NDEP provided concurrence with "No Further Action" in a letter dated May 17, 1994, monitoring wells GTI-26, GTI-28, GTI-29 and GTI-30 were installed.

19. Page 6, Section A, Vadose Zone and Soil: The Draft Final Decision Document states "*Soil Borings BH01 to BH03 were drilled in the Building 378 investigation area. No petroleum hydrocarbon (PHC) contamination was detected in the samples (Table 1). Soil samples from the monitoring well borings were collected in the saturated zone. Samples from MW04 and MW05 contained 1 to 4 ug/L toluene. This contamination is associated with the dissolved-phase ground-water plume overlapping from Site 2. Bis(2-ethylhexyl)phthalate, methylene chloride, and acetone were reported as laboratory contaminants in many of the samples.*"

The Decision Document needs to include information from the PA/SI Report regarding the collection of the two surface soil samples. See Comment 10. Analytical results for one of the soil samples indicated a TPH concentration of 17,000 mg/kg. This sample was collected just

south of the Truck Wash-Down Area and Former Sump. See page 8-4 in the PA/SI Report. It should be noted this sample was collected in an area where free product was later discovered on the water table. It appears the extent of soil contamination at the location of this soil sample was not investigated during the RI/FS. The second soil sample collected during the PA/SI was collected approximately 250 feet south of the first sample and contained a TPH concentration of 40 mg/kg. The three borings described above (BH01 to BH03) were drilled at the south end of Building 378, approximately 100 feet north of the second soil sample collected during the PA/SI. This information needs to be included in the Decision Document.

The Decision Document also needs to clarify that contaminated soil was not discussed in the June 1991 Site 2 EECA which was prepared for Sites 2 and 4 (Group I Sites), and that remediation of contaminated soil was to be addressed during free product removal. Based on documentation provided to the NDEP, these tasks do not appear to have been implemented. The following quotations are provided for reference.

Conclusion 3 on page 67 of the EECA

“Site characterization information is not sufficient to develop and screen remedial alternatives for contaminants of concern at Site 2. While the range of contaminant concentrations present at the facility is apparent, the extent of subsoil residual contamination requires further definition”

Recommendations on page 67 of the EECA

“It is recommended that a subsurface sampling program be initiated during implementation of the free-product removal actions to address the need for additional site characterization data discussed above”

Page 4 of NAS Fallon’s letter dated July 13, 1994

“The need for remedial actions for contaminated soil will be assessed during and after free product removal from the water table. Field data and risk considerations will be used for a comparative analysis of active soil remediation measures and natural attenuation/bioremediation.”

It is significant to note that Figure 13 on page 59 of the June 1991 EECA is virtually identical to Figure 6 in the Draft Final Decision Document. This observation indicates that data collected since 1991 were not incorporated in the interpretation of site conditions. Also, analytical data for soil samples collected above the free product plume from borings and monitoring wells installed at Site 4 are not provided in the Draft Final Decision Document. It is unclear if soil samples were collected above the water table in the GTI wells. It appears that characterization work to evaluate the extent of soil contamination over the free product plume at Site 4 has not been performed, and that NAS Fallon’s plans to address soil contamination have not been implemented. The Decision Document needs to clarify the activities performed at Site 4 to address contaminated soil at the Truck Wash-Down Area and Former Sump, or provide a schedule of activities to address soil contamination.

In a letter dated December 9, 1991, the NDEP requested that soil samples be collected near the

open concrete sump at the truck wash down area. In a letter dated January 21, 1999, the NDEP requested that analytical results for these samples be included in the Decision Document for Site 4. NAS Fallon has not responded to this request. Based on additional review of the administrative record, it now appears these soil samples may have been collected from borings S2BH01 and S2BH02. Borings S2BH01 and S2BH02 appear to be located approximately 100 feet up gradient of the sump. The NDEP concludes that soil samples near the sump have not been collected. This issue needs to be addressed in the Decision Document. Additional information regarding borings S2BH01 and S2BH02 is presented below under comment **20**.

Table 1 in the Draft Final Decision Document shows that soil samples were collected from borings BH01 and BH02 on two dates (March 1991 and December 1991). Generally speaking, only one set of soil samples can be collected from a borehole during drilling. The locations and collection dates for these soil samples need to be clarified.

In a letter dated January 21, 1999, the NDEP requested that a copy of the Sampling and Analysis Plan for the RI/FS be provided. To date the NDEP has not received this Plan. The Sampling and Analysis Plan needs to be included in the administrative record. Additional comments regarding the soil sampling program at Site 4 may be forthcoming after the NDEP reviews the Sampling and Analysis Plan.

20. Page 7, Section B, Groundwater, fourth paragraph: The Draft Final Decision Document states *“During July 1995, four additional wells were installed and sampled at Site 4 as part of the Site 2 removal action (see Fig. 4). Sampling results for these wells, installed by Groundwater Technology, Inc. (GTI), are also presented in Table 2. LBPHC results for the samples were 550 ug/L, 1,900 ug/L, and 18,000 ug/L for wells GTI-26, GTI-29, and GTI-30, respectively. No VOCs were detected in the wells. Well GTI-28 contained approximately 0.84 ft of free - phase JP-5. See Fig. 6 for the dissolved and free product plume for Group I.”*

The Decision Document needs to clarify that the free product thickness of 0.84 feet exceeds the State action level of ½ inch. In addition to the above statement, the Decision Document needs to state that free product was also measured in wells GTI-29 and GTI-30 and that the dissolved concentrations of TPH described above were determined by using the TPH-**gasoline** method (see the January 25, 1996 Progress Report, section 5.5.2). While this method is considered appropriate for volatile organic compounds (VOCs), the TPH-**diesel** method may have yielded significantly higher concentrations than those reported in the above statement. Based on data provided in the Draft Final Decision Document, the GTI wells listed above have not been sampled since July 1995 and do not appear to have been included in a groundwater monitoring program. The Decision Document needs to include this information.

The free product plume described above is labeled “Product Area 2” on Figure 6 in the Draft Final Decision Document. Based on Figure 6, the plume originates from Site 4 at the Truck Wash-Down Area and Former Sump, north of Building 378. This plume is also identified in the following documents:

C *Preliminary Site Characterization Summary and Engineering Evaluation/Cost Analysis*

for Site 2 - New Fuel Farm, dated June 1991 (EECA). This document identifies the plume as "Truck Wash-Down Area and Former Sump".

- C *Final Design, Removal Action, Site 2, New Fuel Farm*, dated May 5, 1992. This document identifies the plume as "Plume 3".

The extent of the plume in the above documents appears to be identical to the plume presented on Figure 6 in the Draft Final Decision Document for Site 4. It appears that data collected since 1991 have not been analyzed. Information regarding the stability/movement of the free product plume at Site 4 needs to be included in the Decision Document. Also, information regarding the free product thickness at Site 4 over time would be helpful to assess the variability and migration of the plume and its overall impact to the environment.

NAS Fallon needs to clarify several issues which pertain to the source and extent of the free product plume at Site 4. Recommendations in the Draft Final Decision Document are based on the conclusion that the free product plume at Site 4 originated from Site 2, and that the Site 4 plume will be addressed with Site 2 remedial efforts. Data in NDEP's files indicate this course of action may not be appropriate. NAS Fallon needs to clarify the issues presented in the following paragraphs and justify why their recommendation is appropriate.

In the letter dated January 21, 1999, the NDEP presented two questions to NAS Fallon as follows:

"Based on the RI report, two borings, S2BH1 and S2BH2, were drilled north of this plume at the south end of Site 2. Did analytical results for samples collected from these borings provide information useful for delineating the free product plume or for identifying the source? What is the current free product thickness in this area?"

The NDEP did not receive a response. Therefore, the NDEP performed its own evaluation of borehole data to address the first question. Boring logs for S2BH1 and S2BH2 were not available for review. However, data collected before the RI/FS was implemented were available for review and these data suggest the plume originates from Site 4, not from Site 2. Based on this conclusion, remedial efforts at Site 2 will not be effective at Site 4. The pre-RI/FS data are presented in ERM-West's report entitled *Site Investigation, Fuel Farms, Fallon Naval Air Station*, dated September 1988. Based on boring logs presented in the report, TPH contamination was not identified in soil or groundwater in boring B-25 or the boring for monitoring well W-24. These borings were located at the southern extent of Site 2, just northwest (up gradient) of the Truck Wash-Down Area and Former Sump at Site 4. If groundwater contamination at Site 4 originated from Site 2, then contamination should be present in these borings. This information does not appear to have been considered during the RI/FS, and the RI Report dated September 1994 appears to have presented an erroneous conclusion on page 12-5 which states: *"Four areas of free petroleum product exceeding the NDEP action level for removal action were identified at the Group I Sites (Fig. 7.9, p.7-22). Due to their source areas, the plumes are all considered part of Site 2."*

Additional evidence which supports the conclusion that the free product plume at Site 4 does not originate from Site 2 is provided on page 7-40 of the RI Report. The second paragraph states:

“Two additional soil borings were drilled as requested by NDEP to determine if soil contamination was present in the vicinity of a tentatively identified contaminant source (a former sump reportedly used for catching fuel leaking from refueling trucks). Soil samples were collected for laboratory analysis from every 2-ft interval from the surface to below the water table (3 intervals per borehole). Soil samples collected from BH01 and BH02 were analyzed for LBPHCs, HBPHCs, SVOCs, and VOCs. Results indicated that all samples were without contaminants except the sample from the first 0 to 2-ft interval in BH01, which contained 6 ug/L of HBPHCs as diesel. Thus, the conclusion is that no surface-soil contamination remains at the former sump area.”

The only borings located around the sump, as presented on Figure 7.10 (page 7-27) of the RI Report, are borings S2BH01 and S2BH02. These borings appear to be the same borings which NDEP requested analytical results for in the letter dated January 21, 1999 (see the preceding paragraph in this letter). Based on Figure 7.10 and Figure 7.6 (page 7-16) in the RI Report, borings S2BH01 and S2BH02 were located approximately 100 feet **up gradient** of the sump. Data from these borings cannot confirm the lack of contamination at the sump. In fact, the data, as described in the above

quote, support the conclusion that the free product plume at Site 4 is separate from contamination originating from Site 2.

Figure 7.9 in the RI Report shows groundwater test hole results. Data collected from test holes up gradient of Site 4 indicate no up gradient contamination and support the conclusion that the plume at Site 4 does not originate from Site 2. If NAS Fallon has other data which show the plume at Site 4 originates from Site 2, these data must be provided to the NDEP.

Based on the Site 2 EECA (June 1991), a free product recovery trench was to be installed at Site 4, north of building 378. Based on the administrative record, this trench does not appear to have been installed. In the letter dated January 21, 1999, the NDEP requested additional information regarding this trench. The NDEP has not yet received a response. It appears the trench has not been installed and NAS Fallon has not fully implemented the EECA. It is also significant to note that three test borings (TB01, TB02, and TB03) were drilled to collect data for the design of the trench. TB01 was located down gradient of the Truck Wash-Down Area and Former Sump, approximately 150 feet west of GTI-28 which contained 0.84 feet of free product. Based on boring logs presented in the report entitled *Final Design, Removal Action, Site 2 New Fuel Farm*, dated May 5 1992, TB01 contained 0.04 feet of free product (which is approximately equivalent to the State action level), TB02 contained 0.01 feet of free product, and TB03 contained a slight scum of product. Soils in the borings were predominantly sand. It is also significant to note that the surface soil sample collected during the PA/SI which contained a TPH concentration of 17,000 ppm appears to have been collected near the location of TB01. This information needs to be included in the Decision Document.

The RI/FS Work Plan dated August 1989 states that an attempt will be made to determine whether the drain in Building 378 goes to a leach field or a lined sump (page 1-74). As stated in the Work Plan, tasks to be completed to make this determination may include collecting soil gas samples around the foundation of the building, performing a magnetic geophysical survey to locate buried metal pipes associated with a leach field, or drilling a boring through the concrete floor if no contamination is located outside. Based on documentation in NDEP's files, none of these tasks appear to have been performed, and there is no supporting documentation to verify that a leachfield does not exist. In the letter dated January 21, 1999 the NDEP stated "*Without additional information, NDEP assumes that soil underlying Building 378 is contaminated, and post closure care may be necessary.*" NAS Fallon did not respond to this issue in the Draft Final Decision document currently being reviewed. The RI/FS Work Plan for Site 4 does not appear to have been fully implemented. The Decision Document needs to address contaminated soil that is probably present below Building 378. See comment **27** (item 3).

Table 2 in the Draft Final Decision Document, which lists analytical results for water samples, was mislabeled as Table 1. This error needs to be corrected. Some of the wells on Table 2, such as GTI-30 which had the highest TPH concentration, were not located on the figures in the Draft Final Decision Document. Please ensure that all wells identified on the tables are located on the Figures.

21. Page 7, Section B, Groundwater, last paragraph on page: The Draft Final Decision Document states: "*Bail tests and pumping-tests of the monitoring wells at this site resulted in hydraulic conductivity ranging from 2 ft/day to 220 ft/day. Combining the gradient of 0.001 ft across Site 4 and assuming an average porosity of 33% results in a calculated 1.2 to 135 ft/year groundwater velocity.*"

Bail tests provide qualitative hydraulic conductivity data and are less reliable than hydraulic conductivity data collected from pumping tests. At NAS Fallon, bail tests have generally underestimated hydraulic conductivities. The RI report states on page E-16 "*The results of the pumping tests indicate K values 5 to 125 times higher than the bail-test values. The bail-test data are considered strictly qualitative and yield a relative number for each location*". The groundwater velocity of 1.2 ft/year described above appears to be calculated from a hydraulic conductivity of 2 ft/day which appears to be based on bail tests (compare Tables E.3, page E-17, and Table E-2, page E-8, in Volume III of the RI Report). Based on the relationship between hydraulic conductivities calculated from bail test data and from pumping test data, and the sandy soils logged at Site 4, the 1.2 feet/year groundwater velocity discussed above is probably not representative for the soils at Site 4. The groundwater velocity of 135 feet/year may be more representative of actual conditions at Site 4. Based on data provided in Table E.2 of the RI Report, the ground water velocity may be as high as 560 feet/year. This information needs to be included in the Decision Document.

Based on Figure 3.5.2.iii (page 83) in the Preliminary Site Characterization (PSC) Summary dated January 1992, and Figure 6 in the Draft Final Decision Document, the leading edge of the free product plume at Site 4 appears to be approximately 400 feet up gradient of a former

Carson River Channel. When considering the groundwater velocities described above, contaminants from Site 4 could be transported over considerable distances. This is important information when evaluating contaminant transport and should be included in the Decision Document.

22. Page 8, Section C, Risk Assessment Summary: The Draft Final Decision Document states: “A quantitative risk assessment for Site 4 soils was not conducted due to the absence of contamination. Ground-water contamination below Site 4 is a result of overlapping contamination from Site 2, New Fuel Farm.”

TPH concentrations in soil, which exceeded the State action level of 100 mg/kg, were identified during the PA/SI. Therefore, the NDEP does not concur with the assertion in the first sentence that no contamination existed at the time RI/FS risk assessments were being performed.

Data collected during the RI/FS indicate that a free product plume exists on the water table at the Truck Wash-Down Area and Former Sump. Additional data suggest that the free product plumes at Sites 2 and 4 are not connected. Therefore, the NDEP does not concur with the second sentence in the above statement. See comments **19** and **20**.

The Baseline Risk Assessment conducted for the Group I Sites (Sites 2 and 4) during the RI/FS states “*Relatively low levels of volatile and semivolatile TICs are observed in a few wells.... there are, thus no organic compound data to support a quantitative risk assessment for the Group I Sites ground water plume*” (see page A-45 in Volume III of the RI Report, Baseline Risk Assessment). This statement forms the basis of the risk assessment for Site 4 and appears to have been provided **before** groundwater analytical data were available for contaminated groundwater at Site 4. The Baseline Risk Assessment Report is dated September 1994. The GTI monitoring wells currently located at site 4 were not installed until 1995. Free product, with a thickness of 0.83 feet, was identified in monitoring well GTI-28. Free product was also identified in monitoring wells GTI-29 and GTI-30 (see the January 25, 1996 Progress Report, section 5.5.2). The risk assessment is outdated and does not appear to be applicable for Site 4. If the risk assessment is to be used to support the conclusion of “No Further Action” for Site 4, then the risk assessment for Site 4 needs to be updated, and needs to include all data pertinent to Site 4.

It is unclear why the Baseline Risk Assessment for the Group I Sites (Sites 2 and 4) did not consider the presence of bis(2-ethylhexyl)phthalate (BEHP). BEHP concentrations in groundwater samples collected from some monitoring wells at Site 2 exceeded the MCL of 6 ug/L, including EW-16 which is the nearest Site 2 well to the Site 4 free product plume. The BEHP concentration in EW-16 was reported as 120 ug/L. The presence of BEHP below a concentration of 2 ppb can be due to blank contamination (see *Toxicological Profile for Di(2-ethylhexyl)Phthalate*, dated April 1993, page 103, U.S. Department of Health & Human Services). However, BEHP concentrations detected in ground water samples from Site 2 monitoring wells appear to be too high to be explained away as method blank contamination. The Decision Document needs to provide justification for not including BEHP in the risk assessment.

23. Page 8, Section D, Conclusion: The Draft Final Decision Document states: “*No soil contamination is present at Site 4. Ground-water contamination below the site is related to the Site 2, New Fuel Farm dissolved and free-product plume. Source and groundwater remediation and monitoring as necessary will be accomplished as part of the ongoing Site 2 removal action.*”

The NDEP cannot concur with the above conclusion for the reasons stated in this letter. See comments **10, 19, 20** and **28**.

24. Page 8, Section IV, Proposed Actions: The Draft Final Decision Document states: “*The results of these analyses suggest that concentration of TPH in the stained area at outdoor vehicle maintenance yard attenuated rapidly with depth. It was concluded that oil spills and leaks have not resulted in substantial soil contamination in this area. (Dames & Moore Apr. 88)*

Site 4, Building 378 was investigated with the New Fuel Farm, Site 2. The results of this investigation indicated that the dissolved portion of the plume from Site 2 has extended into the transportation yard but no significant contamination was found associated with the activities at Site 4. Any contamination at Site 4 will be monitored as part of the Site 2 LTM program. The site is not considered a potential human health or ecological risk. Based on this conclusion, the remedial decision for Site 4, the Transportation Yard is No Further Action. (ORNL 94 (I)).”

See comments **10, 19, 20, 22** and **28**.

In the same section, the Draft Final Decision Document also states “*NDEP letter dated 17 May 1994 recommended a **NO FURTHER ACTION** document be prepared for Site 4*”.

The NDEP did not provide a recommendation as indicated in the above statement. NDEP’s May 17, 1994 letter states “*No further investigative or remedial actions are required at Site 4 at this time. Upon compliance with community relations requirements, please prepare a ROD for this site.*” NDEP’s concurrence with “No Further Action” was based on data provided in the draft RI Report and before the GTI wells were installed in 1995. A concern to the NDEP is that data collected before the RI Report was completed, and which are pertinent to characterizing Site 4, do not appear to have been fully considered by NAS Fallon during the RI/FS for Sites 2 and 4 (see Comment **20**). Furthermore, concurrence with “No Further Action” was provided with the understanding that groundwater remediation would be implemented in accordance with the 1991 EECA. To this date, the NDEP does not have documentation showing that these remedial efforts have been implemented. It now appears the extent of soil and groundwater at Site 4 may be more extensive than previously thought when NDEP concurred with “No Further Action” in the May 1994 letter. Also, there is no evidence to suggest that remedial efforts at Site 2 will be effective at Site 4. Consequently, **at this time**, the NDEP cannot concur with “No Further Action” for Site 4. NAS Fallon needs to address contaminated soil and groundwater at Site 4 in accordance with the EECA and State

regulations.

25. Page 9, Section V, Future Activity at Site 4: NAS Fallon has asserted that administrative controls will be imposed on Site 4. Please be advised that administrative controls are subject to future audit.

“No Further Action” at Site 4 cannot be approved by the NDEP at this time for the following reasons:

- C Based on the administrative record, the free product plume at Site 4 was to have been remediated. To approve “No Further Action” without remediation and without appropriate justification is not consistent with prior agreements.
- C Poor documentation.
- C The RI/FS is considered incomplete because the scope of work presented in the RI/FS Work Plan does not appear to have been fully implemented. See comment **20**.
- C The nature and extent of soil and groundwater contamination associated with the Truck Wash-Down Area and Former Sump does not appear to have been characterized.
- C The EECA is considered incomplete because proposed remedial actions at Site 4 do not appear to have been implemented. See comment **19**.
- C There is no supporting analyses to justify that monitoring and/or remediation activities associated with Site 2 will be effective at Site 4.

NAS Fallon needs to submit a work plan to the NDEP, for review and approval, to either implement additional site characterization work to further evaluate the extent of contamination, or to implement remedial action as previously approved. Post-closure monitoring without additional characterization or remediation work will not be considered for approval at this time unless NAS Fallon can provide justification why remedial action wasn’t implemented in accordance with the approved EECA. If the NDEP accepts NAS Fallon’s justification for not implementing remedial action and if NAS Fallon elects to initiate long-term post-closure monitoring without additional characterization work, a post-closure monitoring work plan must be submitted to the NDEP for review and approval and must address contingency plans for site remediation in case if significant groundwater contamination is detected during monitoring. Post-closure monitoring requirements will depend on the extent to which Site 4 is characterized and can be reduced or eliminated if additional characterization work is completed.

TPH concentrations in soil at Site 4 have exceeded the State action level of 100 mg/kg. The Division cannot close this site unless the site is remediated or an A-K analysis is submitted to the NDEP for approval in accordance with NAC 445A.227. If the NDEP does not concur with the A-K analysis, then NAS Fallon has the option of pursuing site closure in accordance with NAC 445A.22705 which states the site can be evaluated, based on the risk it poses to public health and the environment, to determine the necessary remediation standards. Such an evaluation must be conducted using ASTM Method E1739-95, or equivalent method. All supporting documentation, including assumptions and calculations, must be provided to the NDEP for review.

26. Page 9, Section VI, Recommendations: The Draft Final Decision Document states *“This decision document represents the selection of a no action alternative and subsequent closure for Site 4 at NAS Fallon, Fallon, Nevada. The no action alternative was developed in accordance with CERCLA as amended and is consistent with the NCP. This decision is supported by the documents in the administrative record for the site.”*

The NDEP does not concur with the statements provided in this section of the Draft Final Decision Document for the reasons provided in this letter.

27. NAS Fallon needs to address the comments in NDEP’s letter dated January 21, 1999. Comments which need to be addressed, but were not discussed above, are presented below.

Item 2 in NDEP’s January 21, 1999 letter

Accurate drawings must be provided. Site features that are described in the Draft Final Decision Document and which are significant for evaluating site conditions need to be shown on the drawings so that the reader can understand what is going on, especially since considerable time has elapsed since any work was performed at the site. The drawings in the Draft Final Decision Document need to show the following features:

- C The locations of the stained areas which the Draft Final Decision Document refers to (see Comment **10**).
- C The two soil samples collected during the PA/SI (Comments **10** and **19**).
- C The three borings drilled to evaluate remedial design parameters for the free product recovery trench (TB01, TB02, and TB03: see Comment **20**).
- C The location of the free product recovery trench that was to be installed (see Comment **20**).
- C The two borings (S2BH1 and S2BH2) drilled north of the Truck Wash-Down Area and Former Sump (see Comment **20**).
- C The former Carson River channel described in the PSC Summary dated January 1992 (see Comment **20**).
- C The location of monitoring well GTI-30 (See Comment **20**).

Item 3 in NDEP’s January 21, 1999 letter

Information or data that are used to support a decision must be backed up with supporting documentation. Documentation does not need to be provided with the Decision Document, but needs to be present in NDEP’s files. Supporting documentation for Site 4 missing from the NDEP files are listed below.

- C Boring documentation (logs, soil screening result, etc.) for the three borings drilled near Building 378.
- C Inspection report verifying that no leachfield existed for Building 378.
- C Boring documentation (logs, soil screening result, etc.) for the two borings drilled up gradient of the Truck Wash-Down Area and Former Sump (borings S2BH1 and S2BH2).
- C Boring documentation (logs, soil screening result, etc.) for the GTI wells.
- C Laboratory analytical reports.
- C Sampling and Analysis Plan for the RI/FS (Volume III of the RI/FS Work Plan).

NAS Fallon needs to close the loop on this issue and either provide the supporting documentation, or state the supporting documentation does not exist and is not included in the Administrative Record.

Item 4 in NDEP's January 21, 1999 letter

Contaminant concentrations must be compared to the ARARs (MCLs, PRGs, or State action levels) and quantification limits to justify that a decision is appropriate. The quantification limit for the analysis of semi-volatile organic compounds (SVOCs) in groundwater was reported in the Draft Final Decision Document as 10 ug/l. This is higher than MCLs or PRGs which have been established for several compounds that could be present in groundwater. This information must be clearly presented in the Decision Document.

28. Appendix C, Section 3 Comments, Page C-2 (first paragraph on page): The Draft Final Decision Document states *"The RI soil analytical data indicate two samples with elevated Total Petroleum Hydrocarbon (TPH) concentration levels. These are isolated stained areas and did not contribute to the free product plume in this area. The source of the plume is from IR Site 2. Free product recovery trench was proposed for site 2 and not site 4."*

The NDEP does not concur with the above statement. The NDEP has no data to support the assertion that the stained areas are isolated. The TPH concentration in one of the samples exceeded the State action level of 100 mg/kg and its location coincides with the free product plume. Also, existing data and documentation indicate the free product plume at Site 4 does not originate from Site 2, and that a free product recovery trench was proposed for Site 4. See Comments **10** and **20**. If NAS Fallon can demonstrate the above statement is accurate, the NDEP will reconsider its position.

29. Appendix C, Section 3 Comments, Page C-2 (second paragraph on page): The Draft Final Decision Document states: *"NDEP letter dated 3/5/96 recommended that groundwater contamination be addressed during remedial activities at Site 2 to support No Further Action at Site 4. Soil around B-378 is not contaminated as concluded in the RI. PA/SI did not recommend further soil investigation and recommended No Further Action for the stained areas."*

The NDEP did not provide a recommendation for Site 4 in the March 5, 1996 letter. The recommendation described above originated in Sections 2.4 and 2.5 of NAS Fallon's draft Decision Document dated November 1995. The NDEP was commenting on the draft Decision Document and requested that the rationale for the recommendation be included in the Introduction of the Decision Document. The rationale originated from NAS Fallon, not the NDEP. It should also be noted that NAS Fallon did not respond to NDEP's comments in the March 5, 1996 letter. Also, based on NDEP's current understanding of Site 4 conditions, remedial action at Site 2 may not be effective at Site 4 (see comment **20**). Therefore, the NDEP does not concur with "No Further Action" for Site 4 based on the assertion that ground water contamination at Site 4 will be addressed during remedial activities at Site 2.

The NDEP needs additional clarification on the second sentence in the above quote. Based on the RI Report, soil around B-378 was evaluated in borings BH01, BH02, and BH03. These borings are described on page 7-19 of the RI Report and analytical results are presented on page 7-23. Based on the RI Report the NDEP has been reviewing, no contamination was identified in these borings. Does another version of the RI Report exist which presents different information?

In regards to the last sentence, the PA/SI Report was completed before free product was discovered at Site 4 during the RI/FS. One of the stained areas described in the PA/SI Report appears to be located over the free product plume. Therefore, the recommendation provided in the PA/SI Report on this issue is no longer relevant.

30. Appendix C, Section 3 Comments, Page C-2 (third paragraph on page): The Draft Final Decision Document states *“This site is not considered a potential human health or ecological risk as concluded in the RI.”*

Based on the administrative record, there appears to be no basis for this statement, especially when considering the human health and ecological risk evaluation was conducted before data on the free product plume were available, and that data collected during the PA/SI were not available to the risk assessment team. The Decision Document needs to provide supporting documentation and good science to support this conclusion instead of providing opinions that do not appear to be based on the facts.

31. Appendix C, Page C-2, Section 6 comments: The Draft Final Decision Document states *“Reference to public hearing dates, public comments and responses to comments is included in the Draft Final Decision Document.”*

This Draft Final Decision Document has not yet been subjected to the public review process. Therefore, this statement is inappropriate

Since these issues have been on-going and unresolved for an extended period of time, please provide a time frame and schedule for addressing the comments in this letter within 30 days. If we as project managers cannot come to a resolution of these issues, the NDEP will need to initiate the dispute resolution process. If you have any questions, or need further clarification, please do not hesitate to contact me at (775) 687-4670, extension 3053.

Sincerely,

Jeffrey J. Johnson, P.E.
Geological Engineer
Bureau of Federal Facilities

JJJ/js

cc:

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